

APPENDIX B

RAINFALL AND FLOW GRAPHS

Prefatory Note: Dry year is defined to include any year which is below normal, dry, or critical. Wet year is defined to include any year which is above normal, or wet.

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RAINFALL

Figure B-1

Rainfall at Stockton DWR Dayflo rain gage: 7/90 - 9/93

Notes:

Dry years: 1991, 1992

Wet years: 1993

Figure B-2

Rainfall at Stockton DWR Dayflo rain gage: 1/93 - 9/93

Notes:

This period of record is shown at a different scale than in Figure A-1 to correspond to the autosampler data graphs

General Notes:

The Stockton rainfall station is not at the same geographic location as either the Sacramento River at Greene's Landing/Freeport or the San Joaquin River at Vernalis.

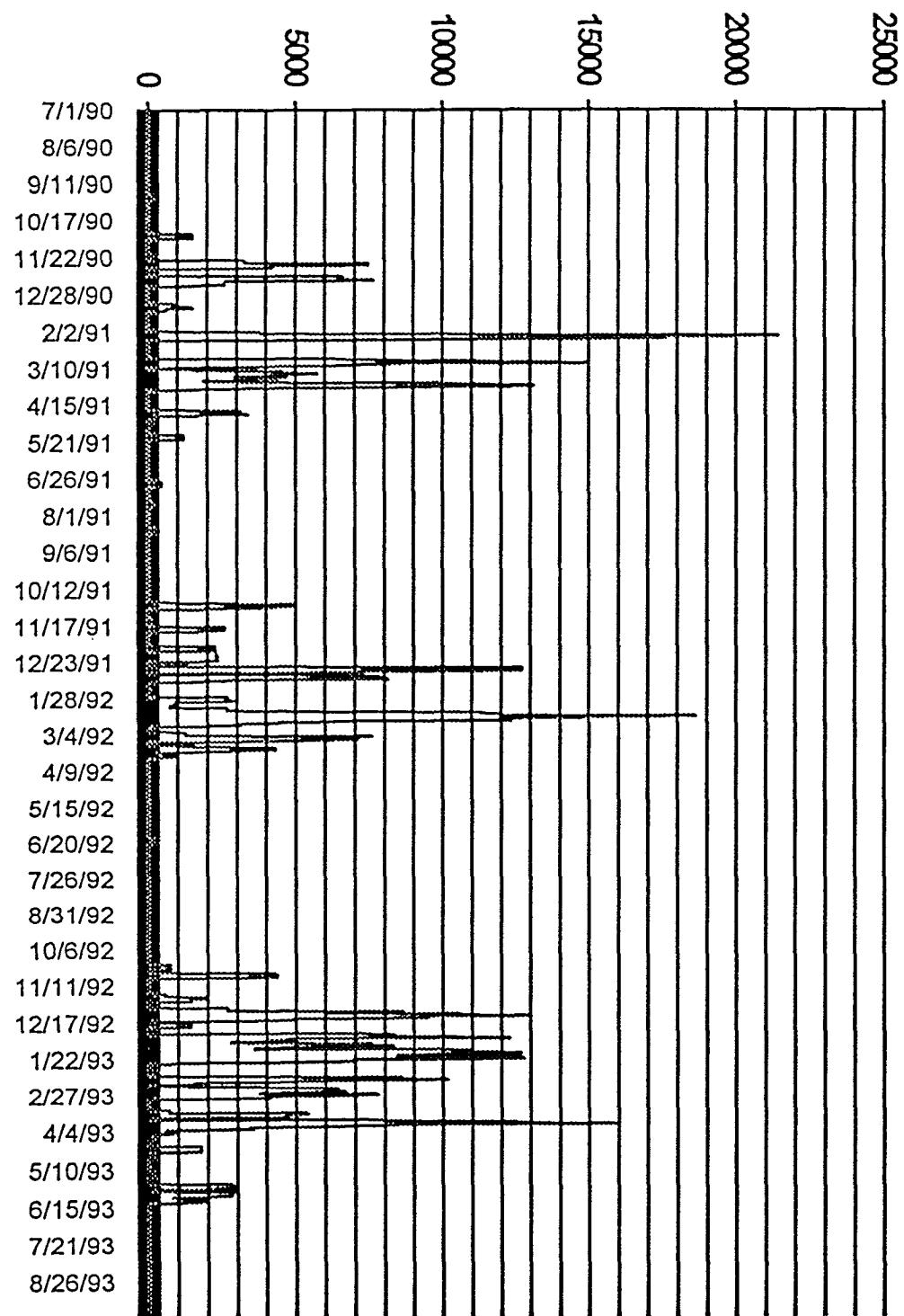


Figure B-1. 1990-1993 Delta DAYFLO Rainfall (cfs)

D - 0 3 6 6 4 4

D-036644

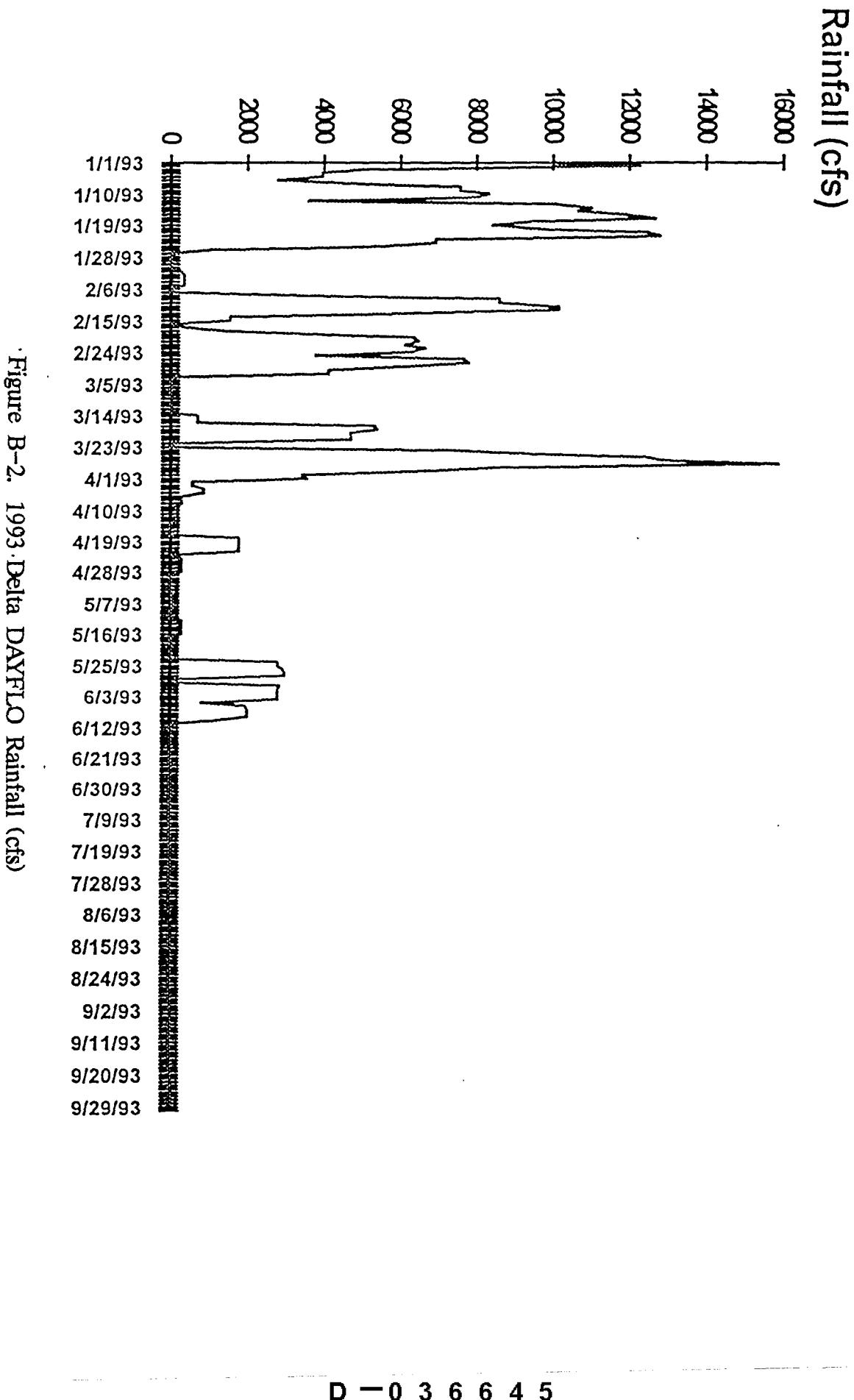


Figure B-2. 1993 Delta DAYFLO Rainfall (cfs)

FLOW AT BENCHMARK LOCATIONS

Figure B-3 Sacramento River at Freeport: 7/90 - 9/93

Notes: Dry years: 1991, 1992
Wet years: 1993

Figure B-4 Sacramento River at Freeport: 1/93 - 9/93

Notes: This period of record is shown at a different scale than in Figure B-3 to correspond to the autosampler data graphs

Figure B-5 San Joaquin River at Vernalis: 7/90 - 9/93

Dry years: 1991, 1992
Wet years: 1993

General Notes: Sacramento River flow was about 10,000 cfs during the dry season of dry years (1991, 1992) and 20,000 cfs during the dry season of wet years (1993). The wet season flow was more variable ranging from a peak of about 45,000 cfs during the wet season of dry years (1991, 1992) to 80,000 cfs during the wet season of a wet year (1993). In contrast, the San Joaquin River dry year dry season flow was about 500 cfs and the dry year wet season flow had a peak of 4,000 to 5,000 cfs (1991, 1992). The wet year dry season flow was about 2,000+cfs and the wet year wet season flow had a peak of about 9,500 cfs (1993).

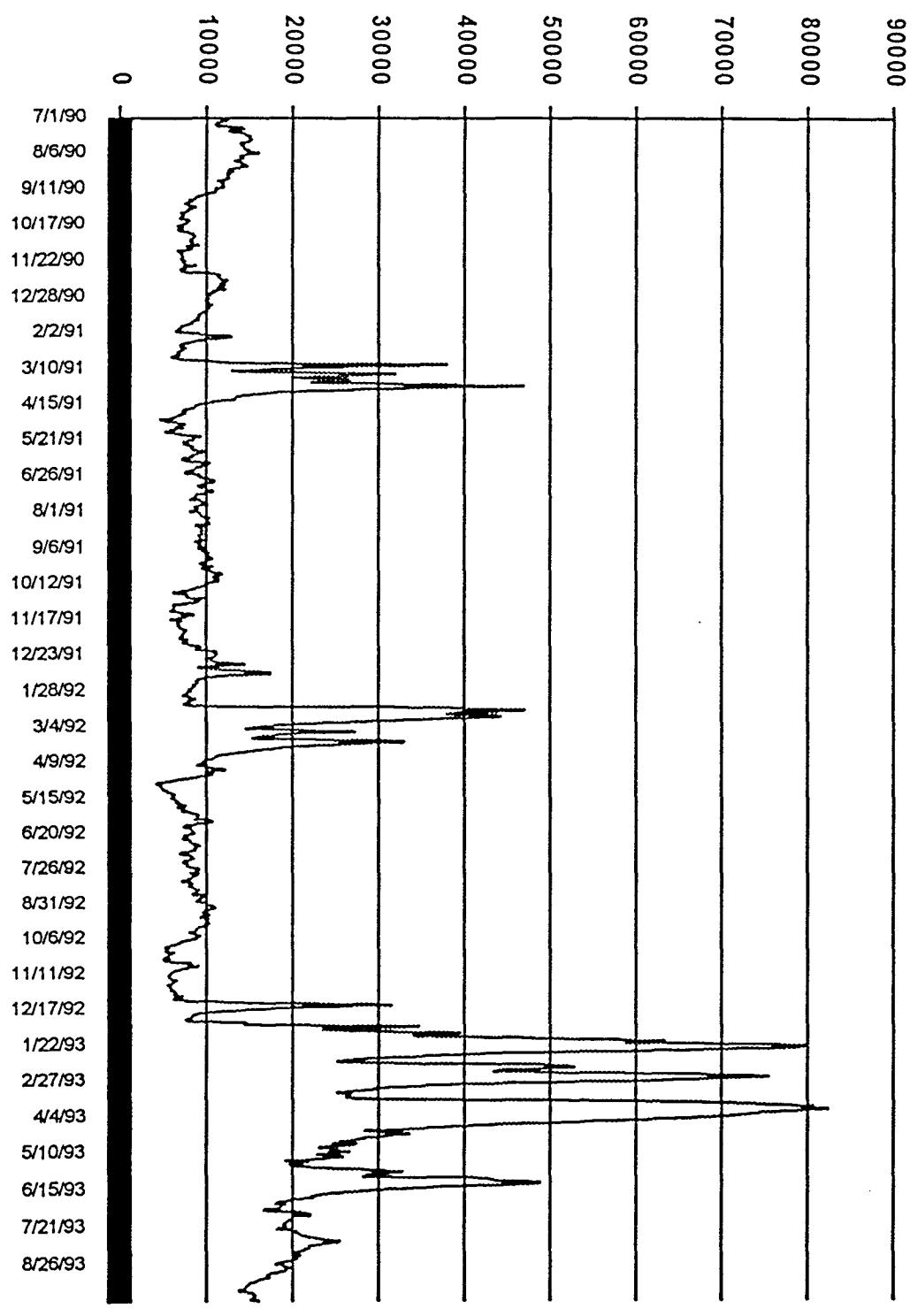


Figure B-3. 1990-1993 Sacramento River at Freeport Mean Daily Flow (cfs)

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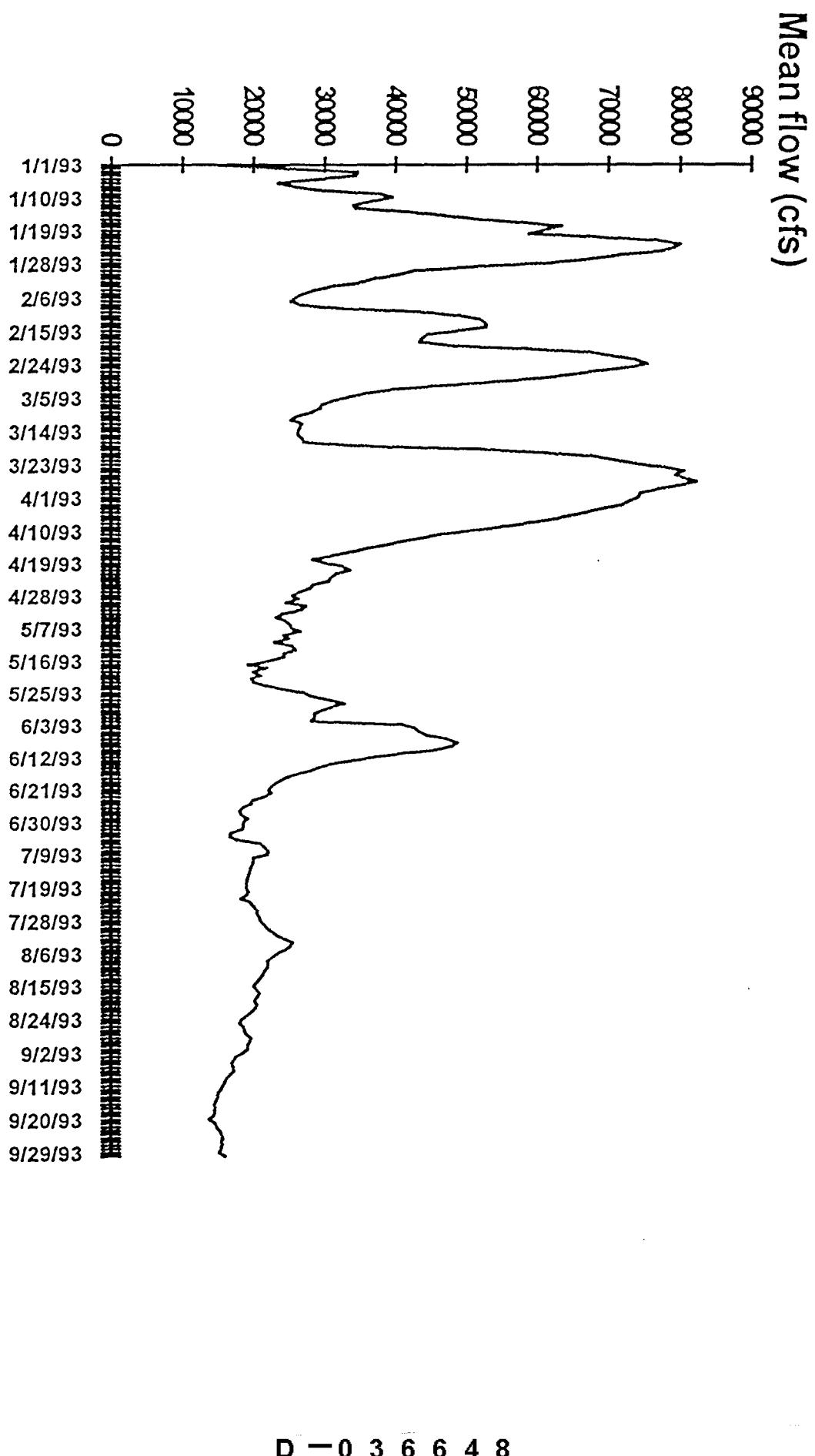
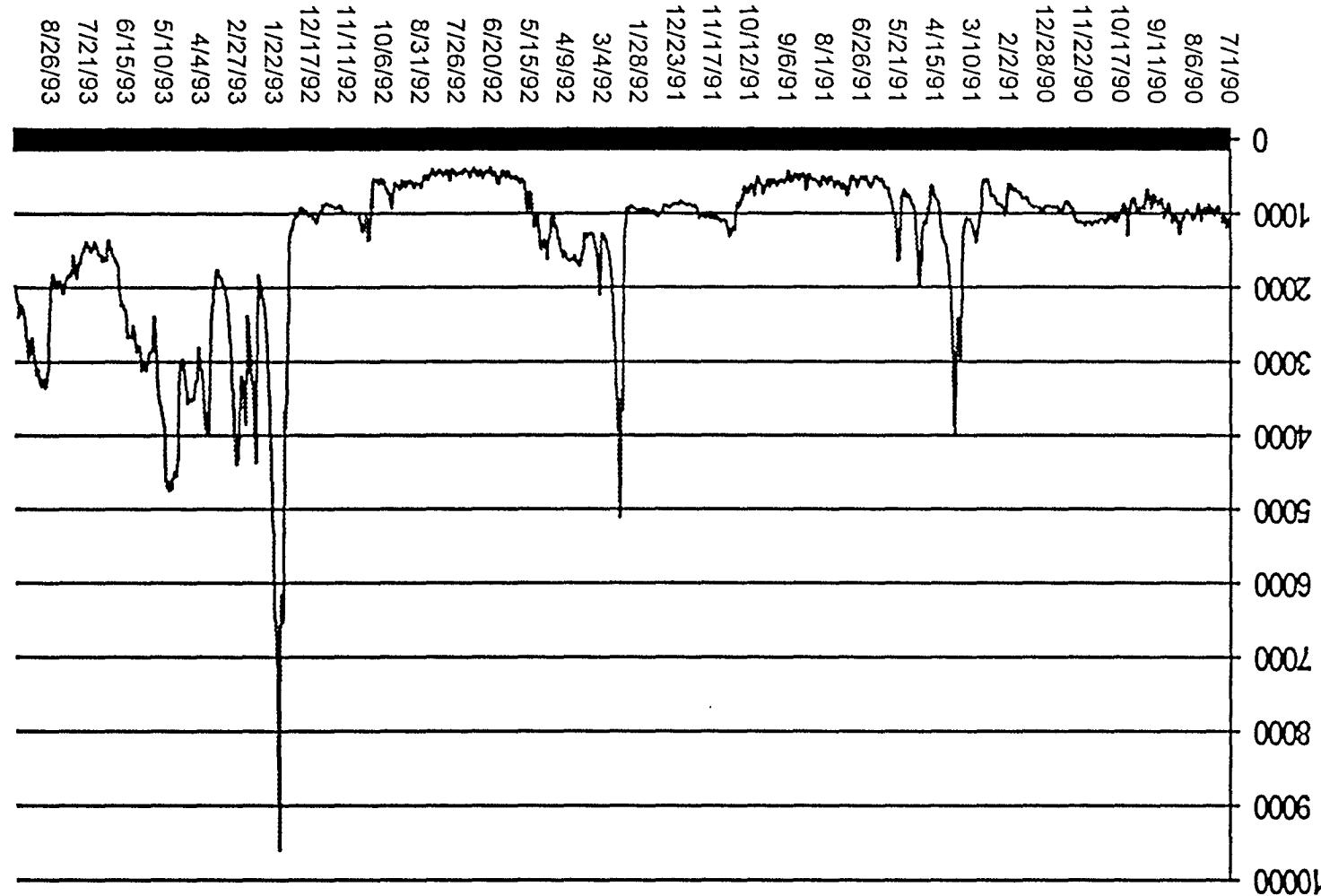


Figure B-4. 1993 Sacramento River at Freeport Mean Daily Flow (cfs)

Figure B-5. 1990-1993 San Joaquin River near Vermaills Mean Daily Flow (cfs)



San Joaquin River near Vermaills Mean Daily Flow (cfs)

FLOW AT DISCHARGE LOCATIONS

Sacramento Basin Agricultural Discharges

Figure B-6 Sacramento Slough: 10/89 - 9/92

Notes: Dry years: 1990, 1991, 1992
Wet years: None

Figure B-7 Colusa Basin Drain: 10/89 - 8/93

Notes: Dry years: 1990, 1991, 1992
Wet years: 1993

Sacramento Regional Wastewater Treatment Plant Effluent: 9/91 - 8/93

Notes: Dry years: 1992
Wet years: 1993

General Notes: Sacramento Slough flow (1990, 1991, 1992) shows definite peaks during the wet season of about 4,500 to 6,000 cfs with considerably less flow during the dry season (zero to about 1,500 cfs). The variability in flow in Colusa Basin Drain masks any wet season versus dry season differences. Flows range from zero to about 1,600 cfs (1991-1993). Sacramento Slough flow is considerably higher than Colusa Basin Drain flow. SRWTP flows are fairly consistent (around 125 cfs). During the wet season, there are some peak flows up to about 250 cfs, probably resulting from the City's combined sewer system inflow to the wastewater treatment plant.

Sacramento Slough daily flows (cfs)

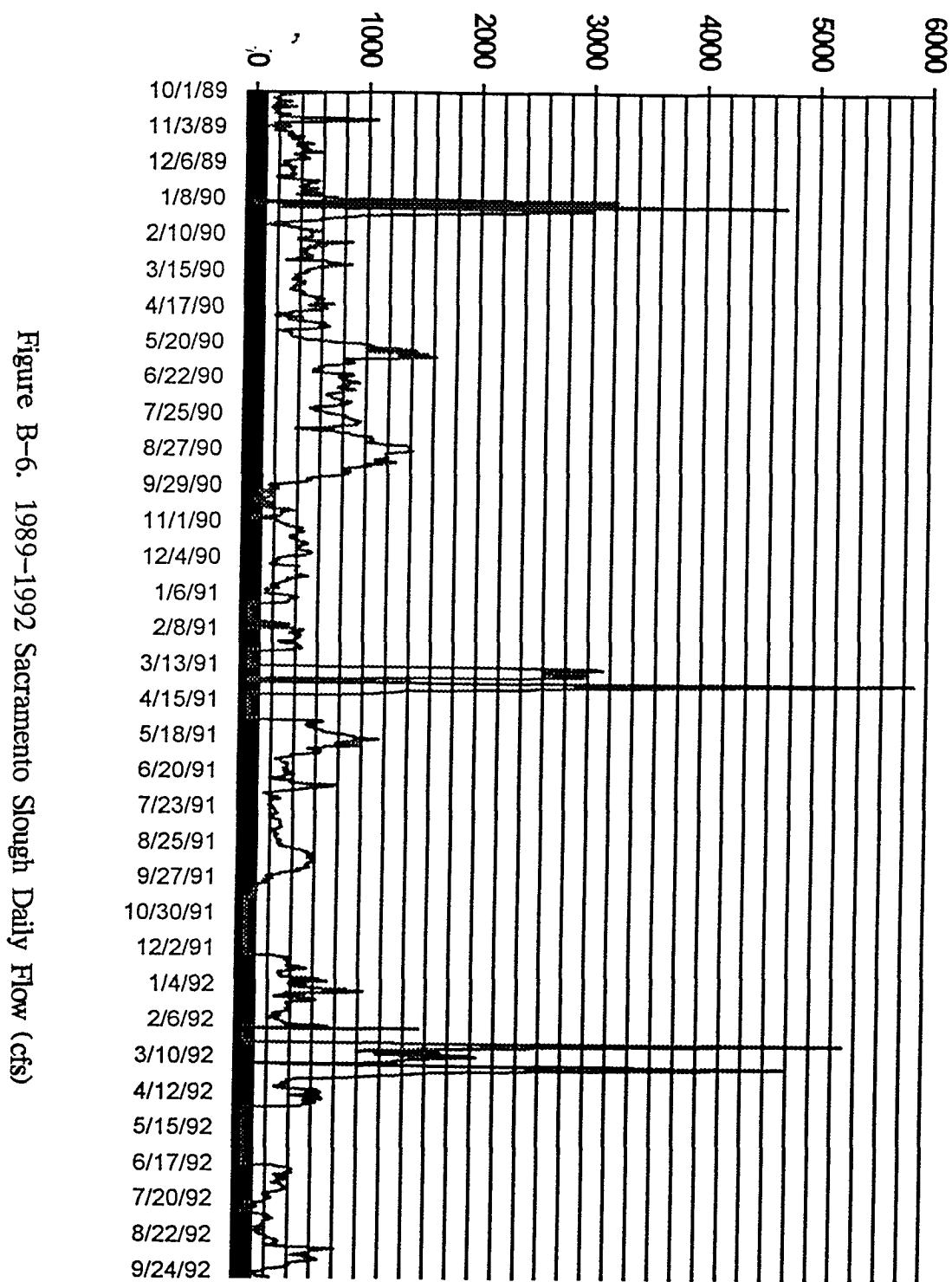


Figure B-6. 1989-1992 Sacramento Slough Daily Flow (cfs)

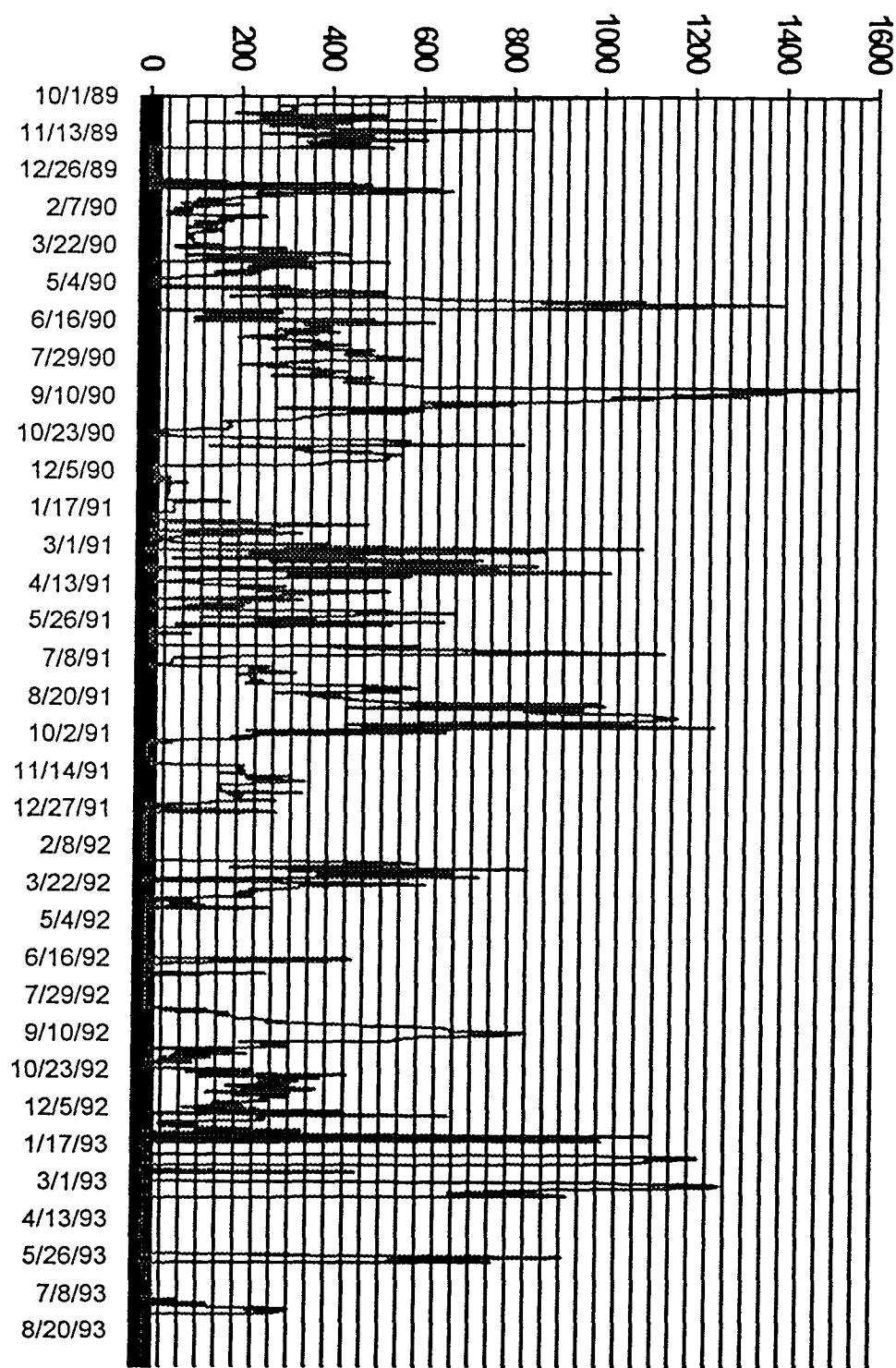
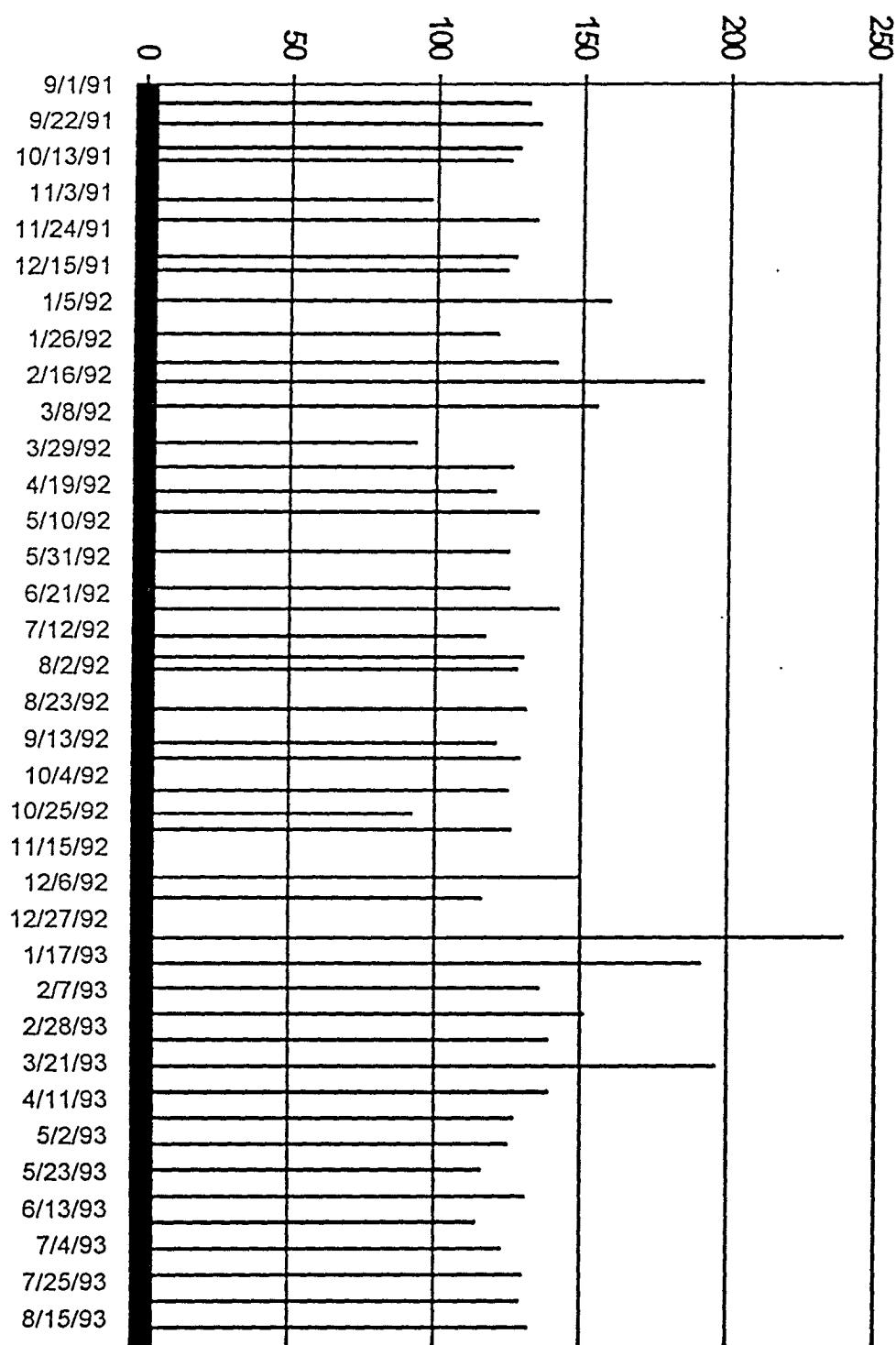


Figure B-7. 1989-1993 Colusa Basin Drain Daily Flow (cfs)

Figure B-8. 1991-1993 Sacramento Regional Wastewater Treatment
Plant Effluent Flow (cfs)



D - 0 3 6 6 5 3

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RAINFALL AND FLOW BY WATER YEAR

Figures B-9 - B-16 Graphs of Delta outflow, Sacramento River flow and rainfall for water years 1982 to 1993

Figure B-17 Graph of Water Year type for the Sacramento Basin

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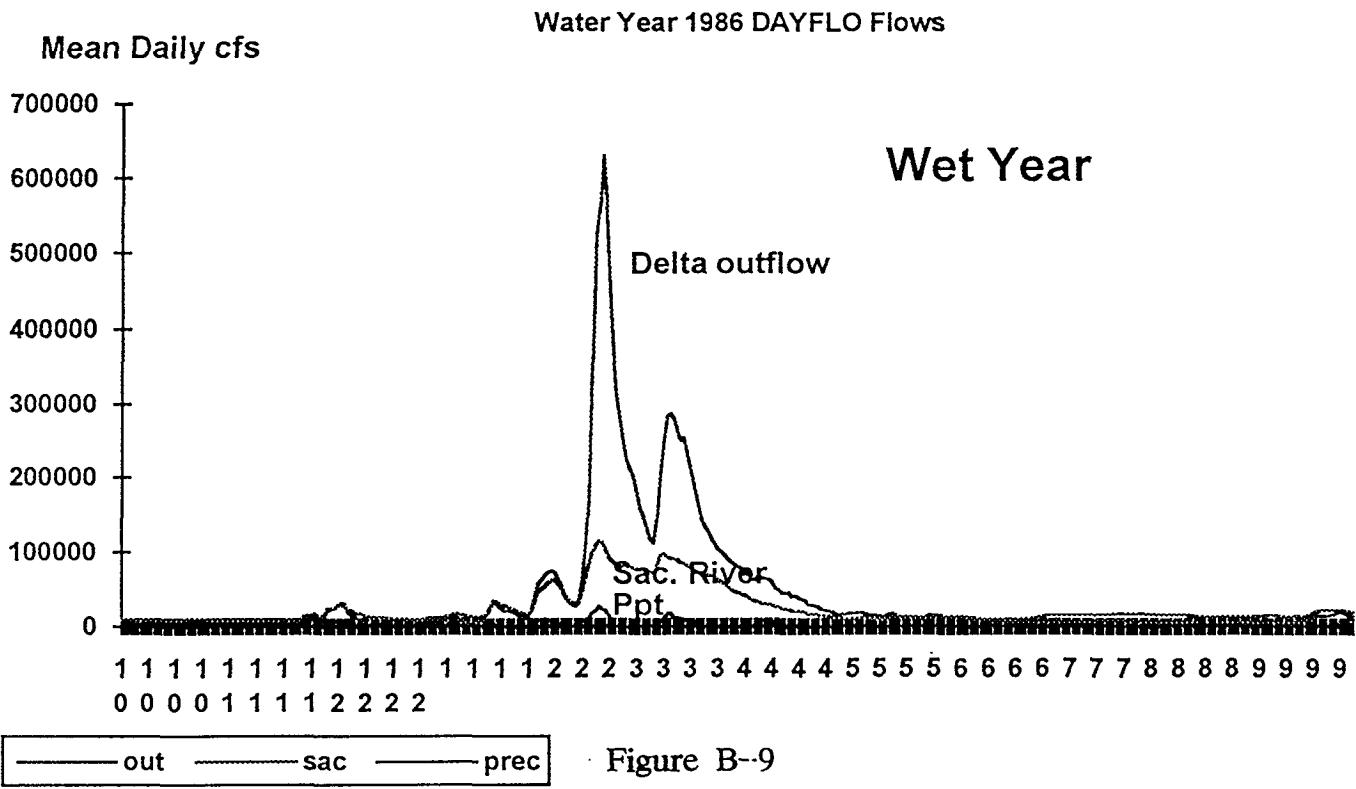


Figure B-9

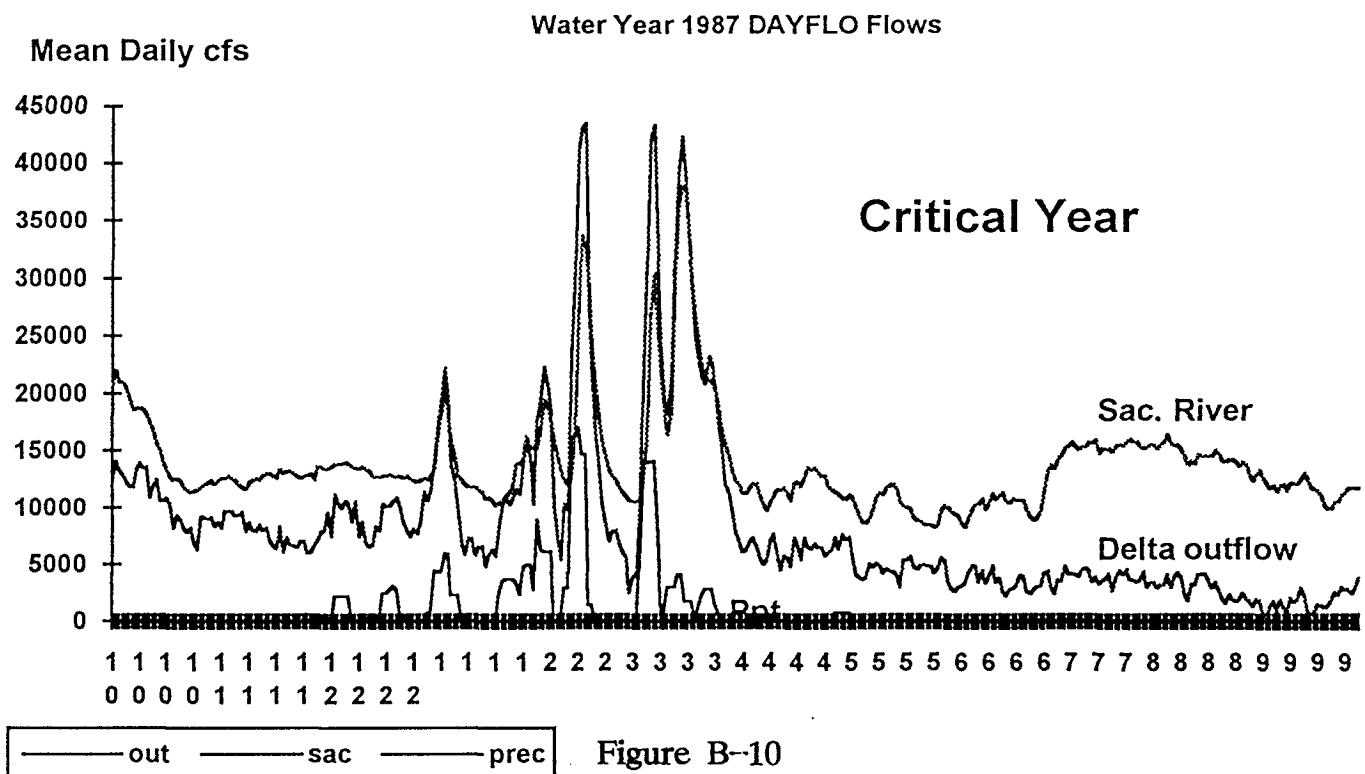


Figure B-10

D - 0 3 6 6 5 5

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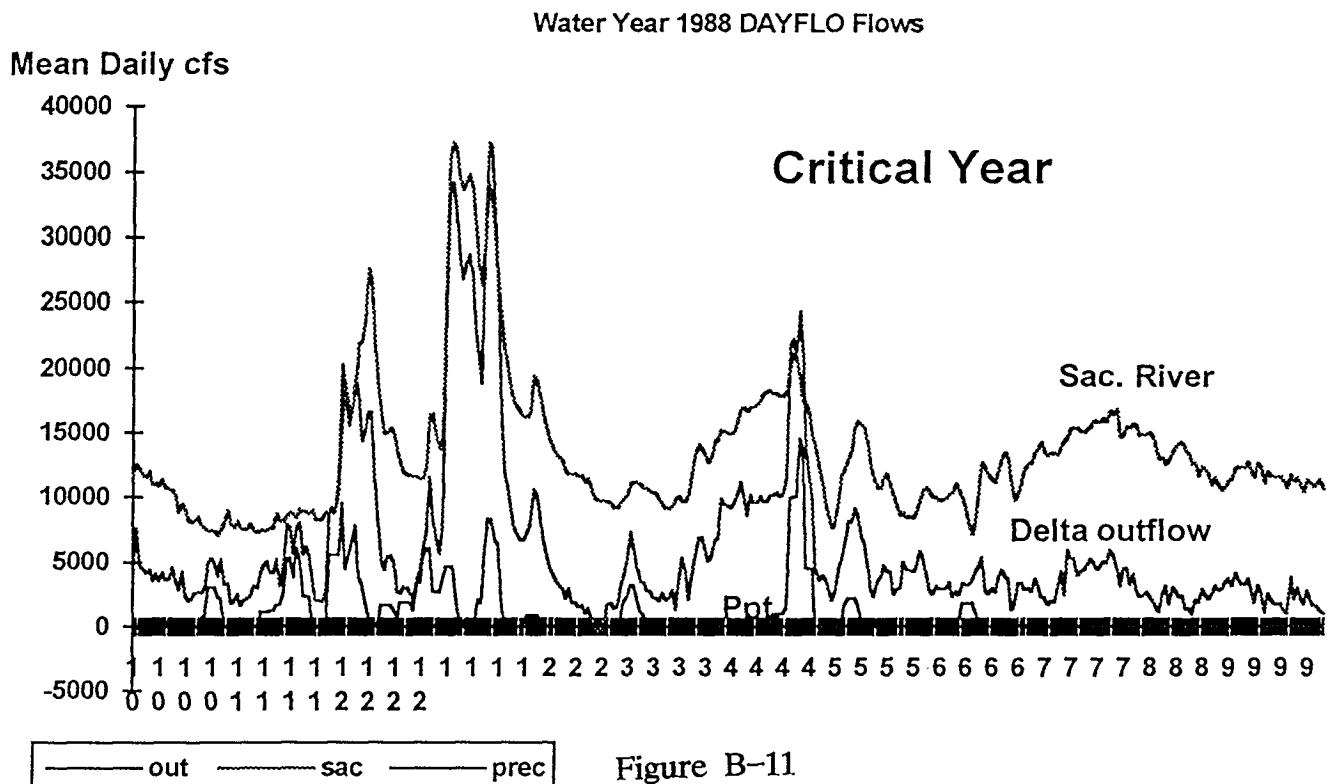


Figure B-11

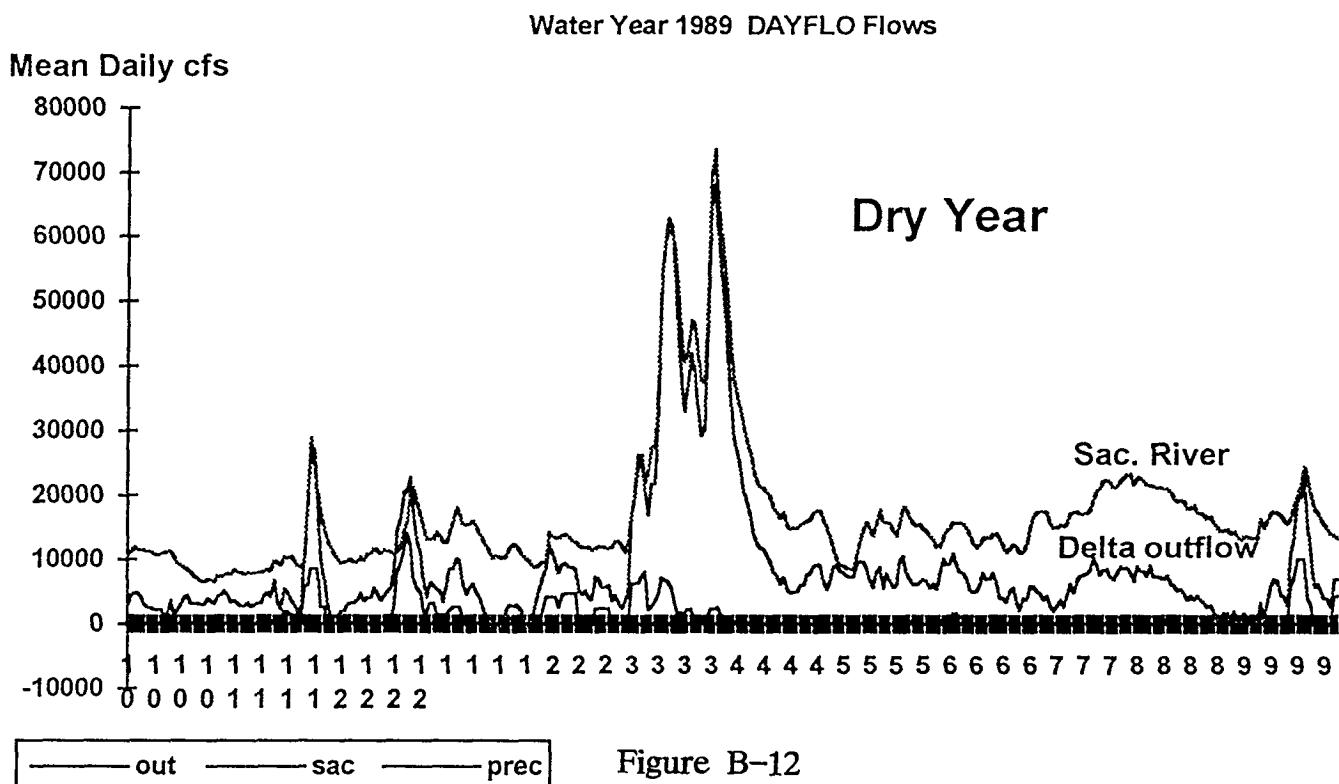


Figure B-12

Water Year 1990 DAYFLO Flows

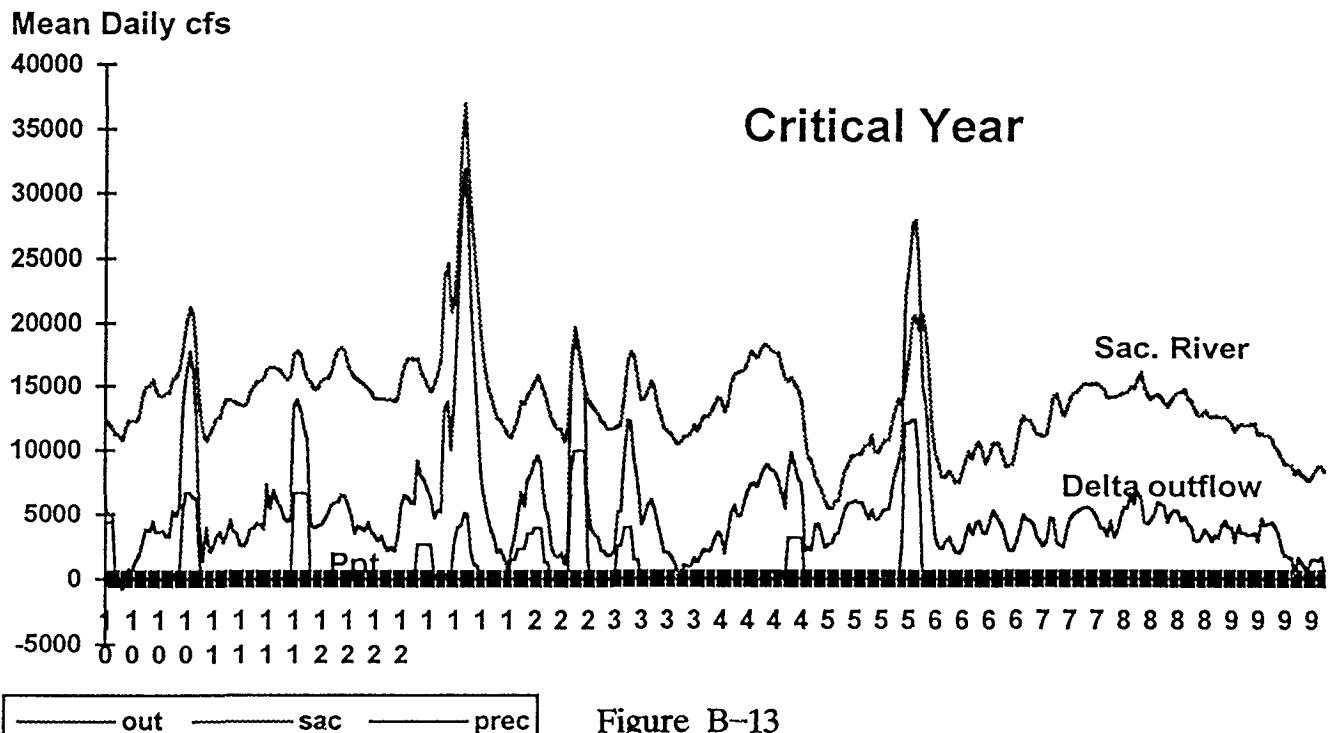


Figure B-13

Water Year 1991 DAYFLO Flows

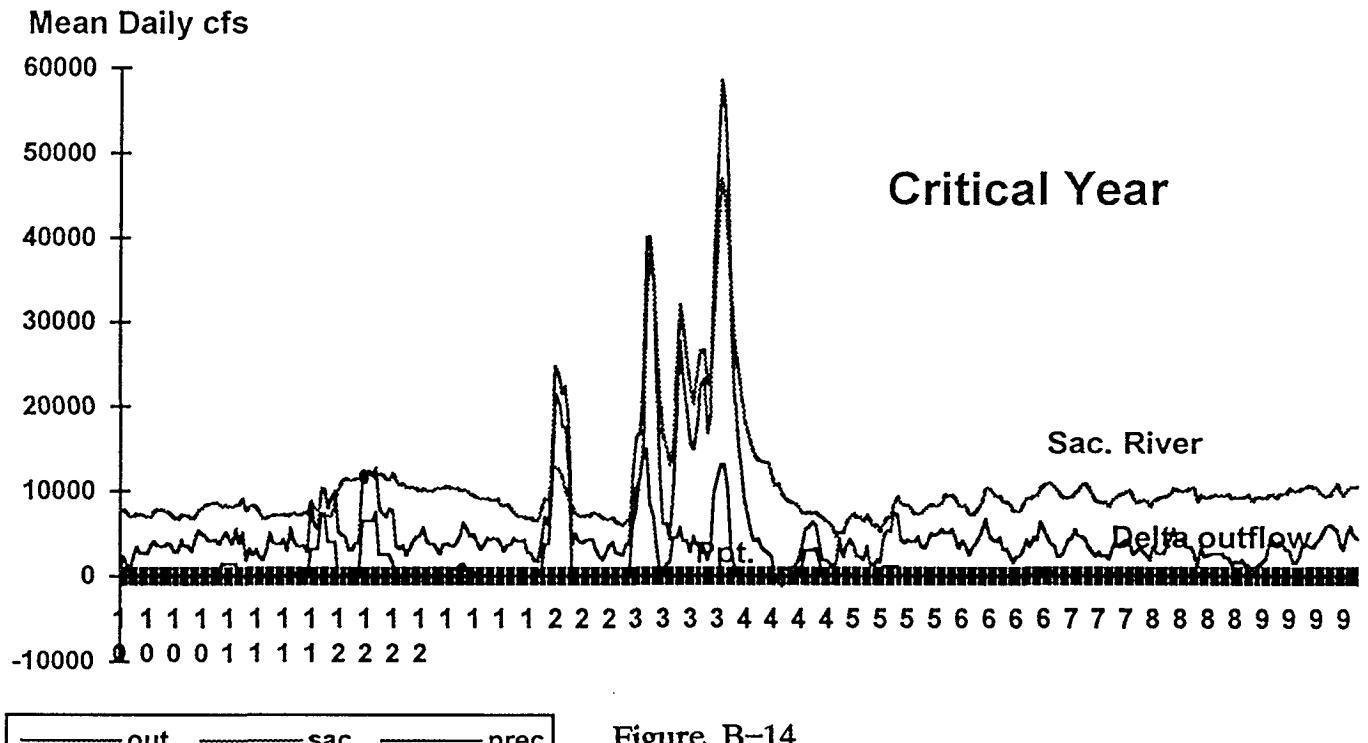
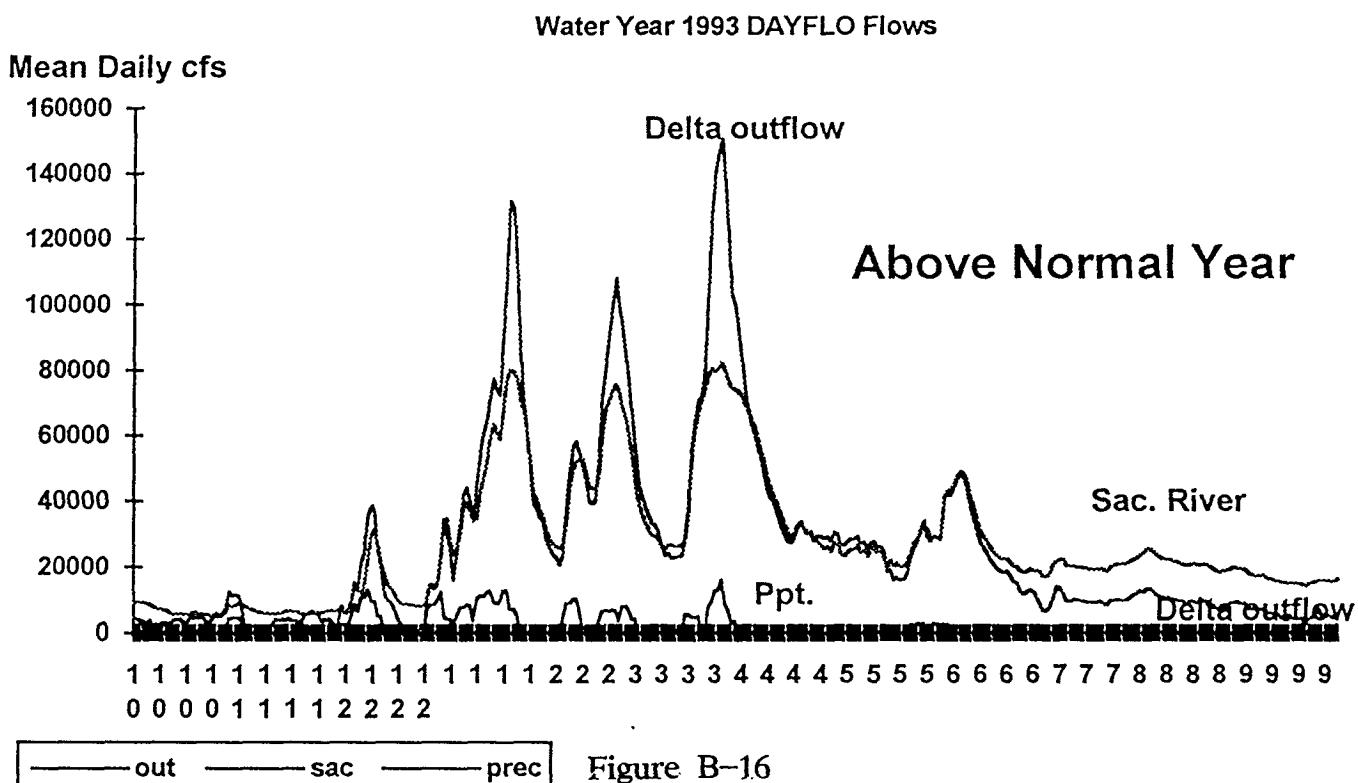
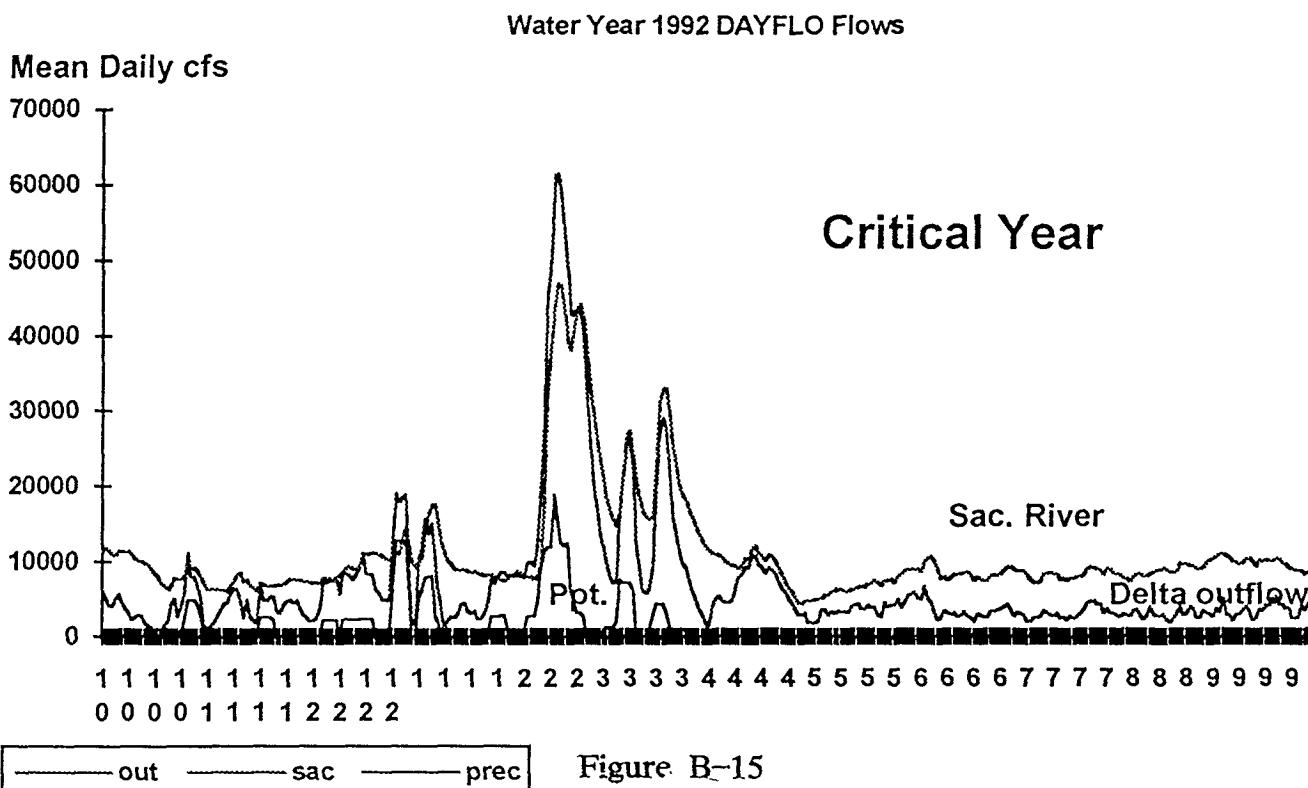
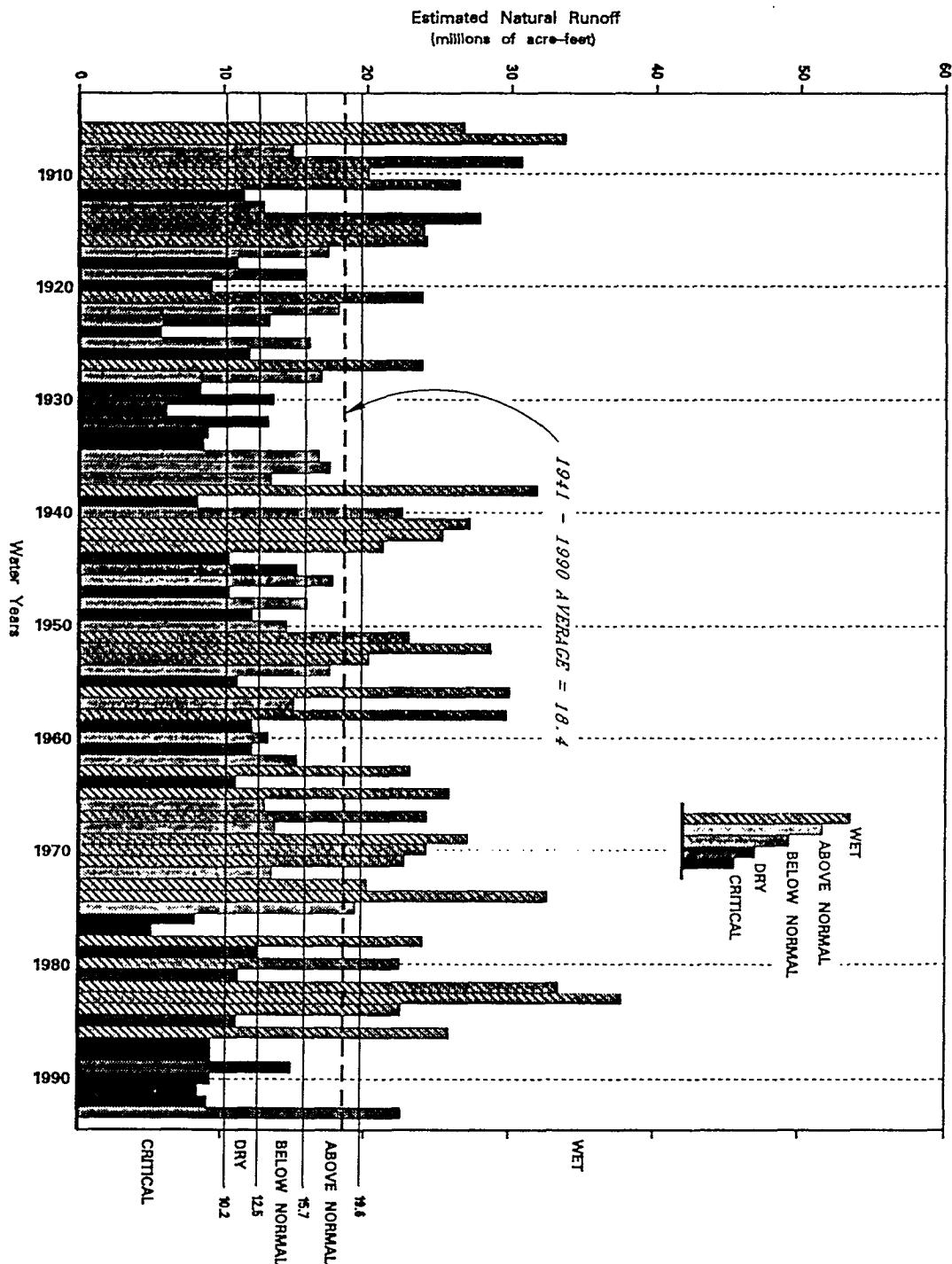


Figure B-14



SACRAMENTO RIVER INDEX SINCE 1906

Figure B-17. Sacramento River Index Since 1906



NOTE: The Sacramento River Index is the sum of unimpeded runoff from the Sacramento River at Bond Bridge, Feather River inflow to Oroville, Yuba River at Smartville and American River inflow to Folsom.